Appln. No. 09/905,716
Amendment Date: August 27, 2006
Reply to Office Action of July 13, 2006
Page 3

Amendments to the Specification:

Please replace the description of FIGS. 1 and 2 on page 2 as follows:

FIG. 1 depicts a Suite of Possible 3G Signal [[Spectr]] Spectra

Formed by Various Combinations of UTRA bands and CDMA-2000 Bands.

FIG. 2 shows Conventional Channelizer to Partition [[#G]] 3G

Signal Set With Various Combinations of UTRA bands and [[DMDA]]

CDMA-2000 Bands.

Please replace the paragraph that begins at the bottom of page 5
and ends at the top of page 6 as follows:

In an equivalent, but alternate structure, a complex band pass

filter replaces the low pass filter. This filter has an impulse

response formed as the product of the low pass impulse response

h(n) and the up-converting complex heterodyne sequence

[[exp(j(oTsn)]] exp(j 2 pi fc Ts n) of the same length.

Here the heterodyne is applied to the filter to move its center

frequency to the band center of the signal rather than the standard

approach, which applies the heterodyne to the signal to move its

Appln. No. 09/905,716
Amendment Date: August 27, 2006
Reply to Office Action of July 13, 2006
Page 4

band to the filter's spectral location. In this structure, the

filtering occurs at the signal's center frequency, and the output

of the filter is properly band limited but still resides at the

carrier center frequency. If it is desired to translate the signal

spectra to base band, this down conversion can be applied after the

filter as shown in figure 3b.

Please replace the single complete paragraph on page 6 as follows:

Since the signal bandwidth has been reduced by the band limiting

action of the digital filter, it is common to reduce the sample

rate of the down converted and filtered time series. The heterodyne

following the band pass filter can be moved to the low data rate

side of the down sampler. Now only the samples delivered to the

output of the down sampler are subjected to the heterodyne and the

workload of the heterodyne is reduced by the same M-to-1 ratio of

the input to output sampling rates. The down sampling operation is

thus applied to the band-centered signal. Reducing the sample rate

of the carrier centered signal results in an alias induced spectral

translation of the center frequency from fc with angular rotation

rate of [[2(fc/fs]] 2 pi fc/fs per sample to an angular rotation

Appln. No. 09/905,716
Amendment Date: August 27, 2006
Reply to Office Action of July 13, 2006
Page 5

rate of [[2(M fc/fs modulo(2())]] 2 pi M fc/fs modulo(2 pi). If the

center frequency fc is any multiple of the output sample rate, say

k fs/M, then the aliased rotation rate is [[2(M (k fs/M)/fs

modulo(2())]] 2 pi M (k fs/M)/fs modulo(2 pi) or [[k 2(modulo(2())]]

k 2 pi modulo(2 pi) which is congruent to zero, which means the

output rate of rotation is zero radians per sample. For the proper

choice of center frequency relative to sample rate, the down

sampled data samples represent a signal that has been aliased to

DC. Selection of the sample rate to be an integer multiple of the

signal center frequency is one of the suggested restrictions

addressed earlier. The restriction is also applicable when the

ratio of sample rate to center frequency is a rational ratio of

small integers.